



9903 Dolphin II Weighing Scale User Manual



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INSTRUCTION FOR USE

Thank you for purchasing the 9903 Dolphin II weighing scale of Excell. To enable you to use this scale correctly, we suggest that you read the following instructions carefully.

1. Don't bump the scale against other items nor load it with heavy weight exceeding its full capacity.
2. Keep it away from high temperature.
3. If the scale is not going to be used for a certain period of time, clean it and store it in a polythene bag. A desiccant may be included.
4. If the scale is not used for a long period of time, recharge it every 3 months so as to ensure a long life of the battery. Fully recharge it before using again. Take care not to keep the scale being charged for too long.
5. Commodities should be placed at the center of the platter when being weighed, and can't exceed the dimension of the platter.

PREPARING TO USE THE SCALE

1. Please locate the scale on a stable, level surface to ensure accurate weight readings.
2. Adjust the four leveling feet to make the balance horizontal. Make sure that the level bubble is in the center of the circle.
3. Keep the scale away from places with strong drafts or excessive temperature fluctuations (e.g. direct sunlight or the air louver of an air conditioner).
4. There should be no weight on the scale when the scale is switched on.
5. Once the scale is switched on, it will go through a LCD display test and then re-zero to be ready for use.
6. Please warm up the scale for 15~20 minutes before operation.
7. Please note when the  symbol flashes on the screen, the battery needs to be recharged.



CHAPTER 1 FEATURES AND SPECIFICATIONS

1. Features

- 2 IP65 Wash down design
- 2 Auto calibration
- 2 Large LCD display with LED backlight included
- 2 Kilogram (kg) and pound (lb) weighing modes
- 2 Full range tare; Auto zero tracking
- 2 Adjustable gravity value
- 2 Simple counting; Gross/Net indication; Hold function; Check mode Lo/Hi/OK
- 2 Low power indication and auto power off
- 2 Easily adjusted leveling feet for stability of the scale

2. Options

- 2 Second display (customer side)
- 2 DC 6V/1.2 AH Rechargeable battery
- 2 Stainless steel platter (220 x 190 mm)

3. Specifications

Model	Capacity	Division
9903-3	3 kg (6 lb)	1 g (0.002 lb)
9903-6	6 kg (12 lb)	2 g (0.005 lb)
9903-15	15 kg (30 lb)	5 g (0.01 lb)
9903-30	30 kg (60 lb)	10 g (0.02 lb)
Operating Temperature: 0°C ~ 40°C (32°F ~ 104°F)		
Power Source: AC 110V/230V (±10%) or 4 x UM-1 1.5V dry batteries (not included)		
Dimensions: 242 x 130 x 285 mm (W x H x D)		
Platter Size: 218 x 188 mm (Plastic platter); 220 x 190 mm (Steel platter)		
Display: LCD, 6 Digits. 25 mm (Height), LED backlight		



4. Power Supply

Power Source: AC 110V/230V ($\pm 10\%$) adaptor;


4 x UM-1 1.5V dry batteries; or

6V / 1.2Ah rechargeable battery

Power Consumption:

With backlight: about DC 14 mA; battery life about 85 hours

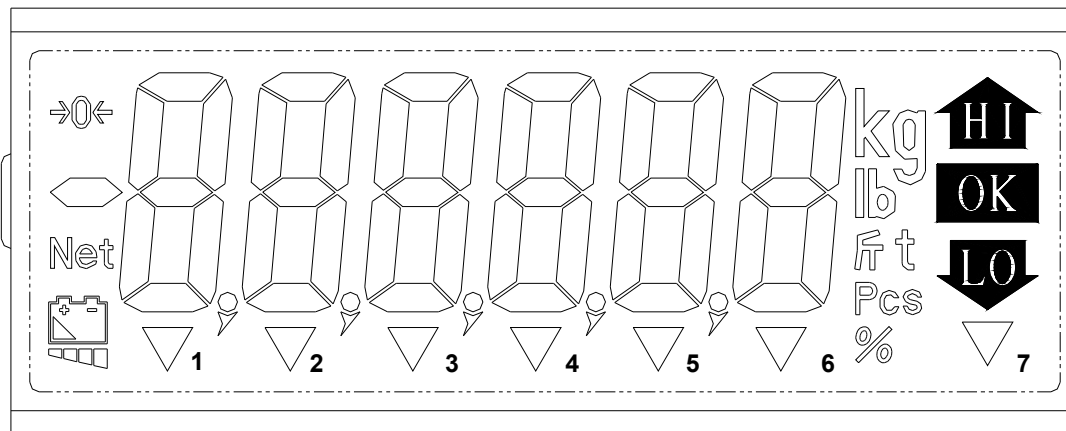
Without backlight: about DC 24 mA; battery life about 50 hours

Low Battery Indication: When the symbol  flashes, the battery needs to be recharged or the dry battery needs to be replaced.

- 4** The scale will power off automatically after 1 to 2 hours if the battery is not charged.
Please fully recharge the battery before using the scale again.



CHAPTER 2 DISPLAY



HI : When this indicator is on, the weight value is larger than the preset high limit.

OK : When this indicator is on, the weight value is between the low and high limits.

LO : When this indicator is on, the weight value is less than the preset low limit.

kg : Indicating that the current weighing unit is “kg”.

lb : Indicating that the current weighing unit is “lb”.

Pcs : Indicating that the scale is in the simple counting mode.

0 : “ZERO” indicator and platform stable confirmation.


Net: When this indicator is on, the scale is in the tare mode, and the net weight is displayed.




: “Low Battery” indicator

6 1 : (STABLE) “stable” indicator

6 2 : (GROSS) When this indicator is on, the scale is in the tare mode, and the gross weight is displayed.

6 3 : () In the counting mode, when this indicator is on, the unit weight of the sample is too small.

6 4 : () In the counting mode, when this indicator is on, the total weight of the sample is too small.


6 5 : (Hold) “Hold weight” indicator

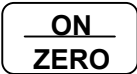
6 6 : “GN”、“dwt”、“ct” unit indicator


6 7 : “oz” unit indicator





CHAPTER 3 KEYBOARD FUNCTION

1.  : Pressed to switch the scale off

2.  : When the scale is off, pressed to switch it on.
When the scale is on, if the weight is within the zero range, this key is pressed to re-zero the display or cancel the tare mode.
4 Zero range:
OIML & NTEP: $\pm 2\%$ of full scale;
Sri Lanka: $\pm 4\%$ of full scale

3.  : Pressed to deduct the container weight.

4.  : Pressed to choose the unit weight “kg” or “lb”.

5.  : Net /Gross weight conversion under tare mode.

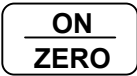


CHAPTER 4 BASIC FUNCTION OPERATION

1. Switch On


When the scale is off, press the  key to switch on the scale

2. Re-Zero

When there is no load on the platter, if the displayed weight is not zero and is within the zero range, press the  key to re-zero the scale, and the indicator “0.0” is on.

- 4 Zero range:
OIML & NTEP: $\pm 2\%$ of full scale;
Sri Lanka: $\pm 4\%$ of full scale

3. Unit Selection

Press the  key to choose the weight unit “kg”, “lb” or the counting unit “Pcs”. The unit indicator “kg”, “lb” or “Pcs” will be on.

- 4 When the scale is switched off, it will memorize the active unit in use, and when it is switched on again, the previous active unit will be shown on the display.



4. Tare Function

(1) Put the container on the platter. When the weight displayed is stable, press the

TARE

key. The weight of the container is thus deducted, and the “**Net**” indicator is on.

(2) Put the object to be weighed into the container, and the display shows the net weight of the object.

(3) Remove the container and the object together from the platter. The display will show the negative value of the container weight.

TARE

(4) Press the key again, the negative value is cleared and the display returns to zero. The “**Net**” indicator is off.

4 Tare continuously: When the container weight increases or decreases continuously, it

can all be deducted by pressing the

TARE

key.

4 Tare value can be up to the full capacity of the scale.

5. Net/Gross Weight Conversion

NET
GROSS

In the Tare mode, when the “**Net**” indicator is on, press the key once.

The display will show the gross weight, the “**Net**” indicator is off, and the **Gross** indicator “**Ⓒ**” is on.

NET
GROSS

Press the key again, the display will show the net weight, the “**Net**” indicator is on, and the **Gross** indicator “**Ⓒ**” is off.

Thus by pressing the key, the net weight and the gross weight can be displayed alternately.

NET
GROSS

4 The key is functional only under Tare mode.


NET
GROSS

4 When the gross weight is displayed, no key but the key is functional.





6. Simple Counting

6-1 Counting mode access

Press the  key to select the “Pcs” unit, and the scale enters the simple counting mode.

6-2 Sampling

This important procedure is to let the scale calculate the unit weight:

- (1) Press the  key to select a sample size 10, 20, 50, 100 or 200.
- (2) Put enough samples onto the platter according to the selected number, and then press the  key. The display shows “- - - - -” first. When the scale becomes stable, the display shows the number of samples on the platter.
- (3) Remove the samples from the platter, and the scale is ready to count.

6-3 Counting

Place the objects to be counted onto the platter, and the quantity shows on the display.

- 4 When any of the following indicator is on, the scale can still count, but inaccuracy may occur:

Sample too small (): total sample weight is less than 20 divisions

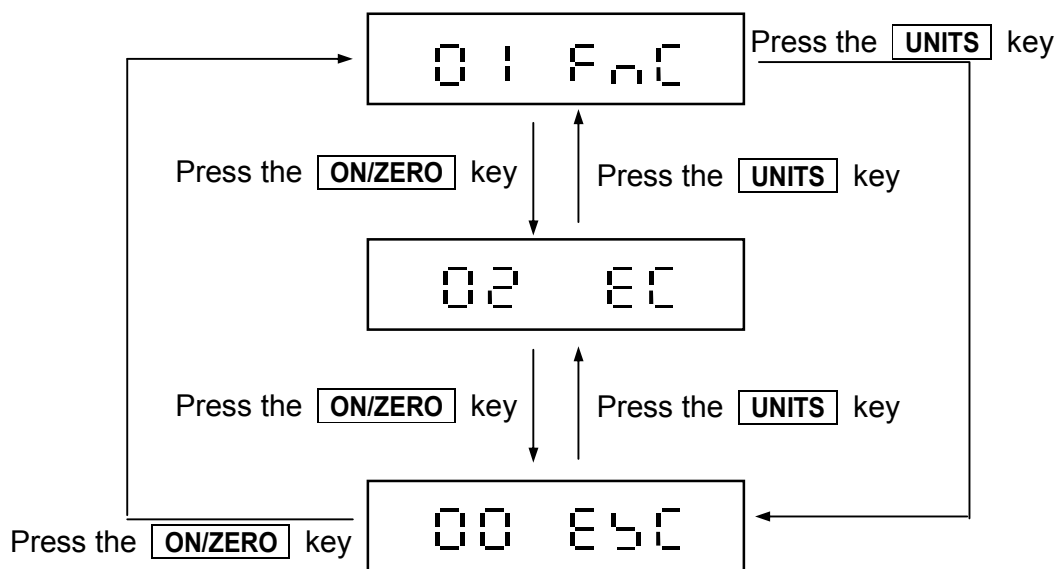
Unit weight too small (): unit weight is less than 1/5 division.

- 4 The scale will memorize the last sample size when switched off, and the same can be used when the scale enters the counting mode next time.
- 4 If the number of samples changes by 5 pieces from the last sample used, the scale will calculate the new unit weight automatically.



CHAPTER 5 ADVANCED FUNCTIONS SETTING

- 4 To access the advanced functions setting, press the **NET/GROSS** key and the **ON/ZERO** key at the same time when the scale is in the weighing mode. The display shows **01 F_nC**.



01 F _n C	⇒	Functions Setting
02 E _C	⇒	External Weight Calibration
00 E ₅ C	⇒	Exit Advanced Functions Setting



1. Function Setting 01 Fnc

4 Six functions Fnc 01 ~ Fnc 06 can be set here.

01 Fnc

Press the **TARE** key

Fnc 00

Input "00 ~ 06"

Fnc 00

If input "00", press the **TARE** key to return to the upper level category.

01 Fnc

ON/ZERO ⇒ Upward digit selecting (0-9)

UNITS ⇒ Downward digit selecting (9-0)

TARE ⇒ Move the cursor rightward

NET/GROSS ⇒ Move the cursor leftward

Fnc 00 ⇒ Return to the upper level category

Fnc 01 ⇒ Auto backlight setting

Fnc 02 ⇒ Auto-off timer setting

Fnc 03 ⇒ Check-weighing setting

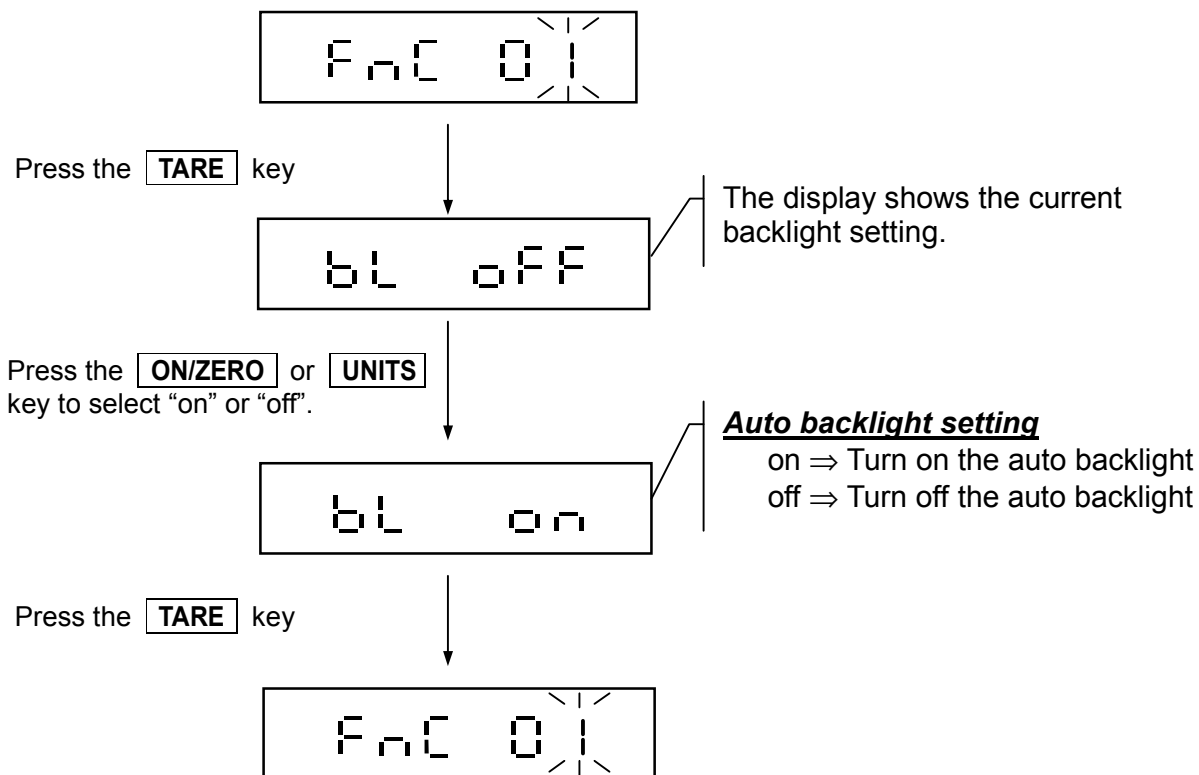
Fnc 04 ⇒ Restore to the factory setting

Fnc 05 ⇒ Environment parameter setting

Fnc 06 ⇒ Hold function setting



1-1 Auto Backlight Setting F n C 0 1

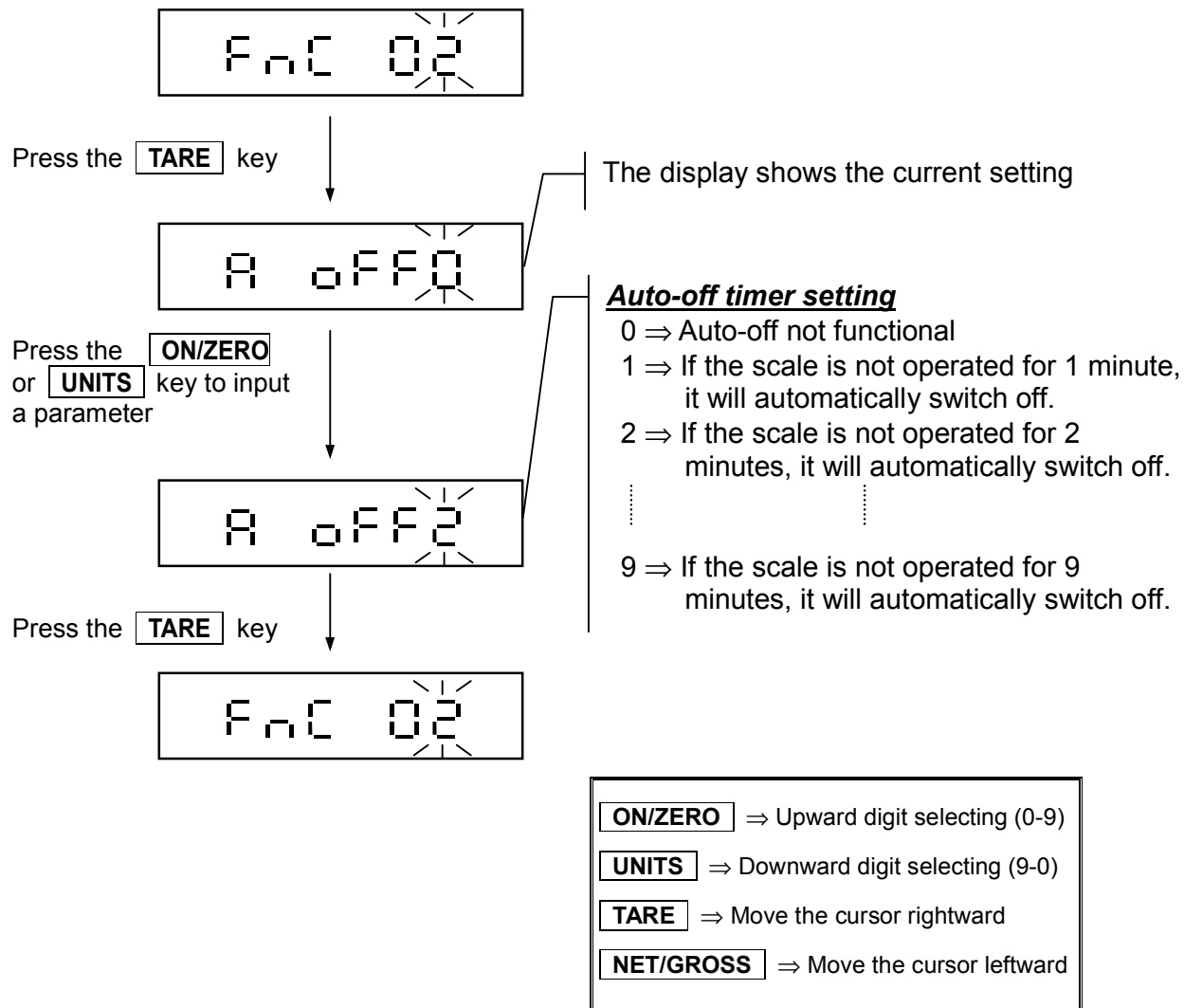


Auto backlight mode

1. When there is weight on the platter (the value is larger than 10 divisions), or when any key is pressed, the backlight is on.
2. After the weight on the platter keeps under 10 divisions while no key is pressed, the backlight will be off in about 10 seconds.



1-2 Auto-off Timer Setting F n C 02



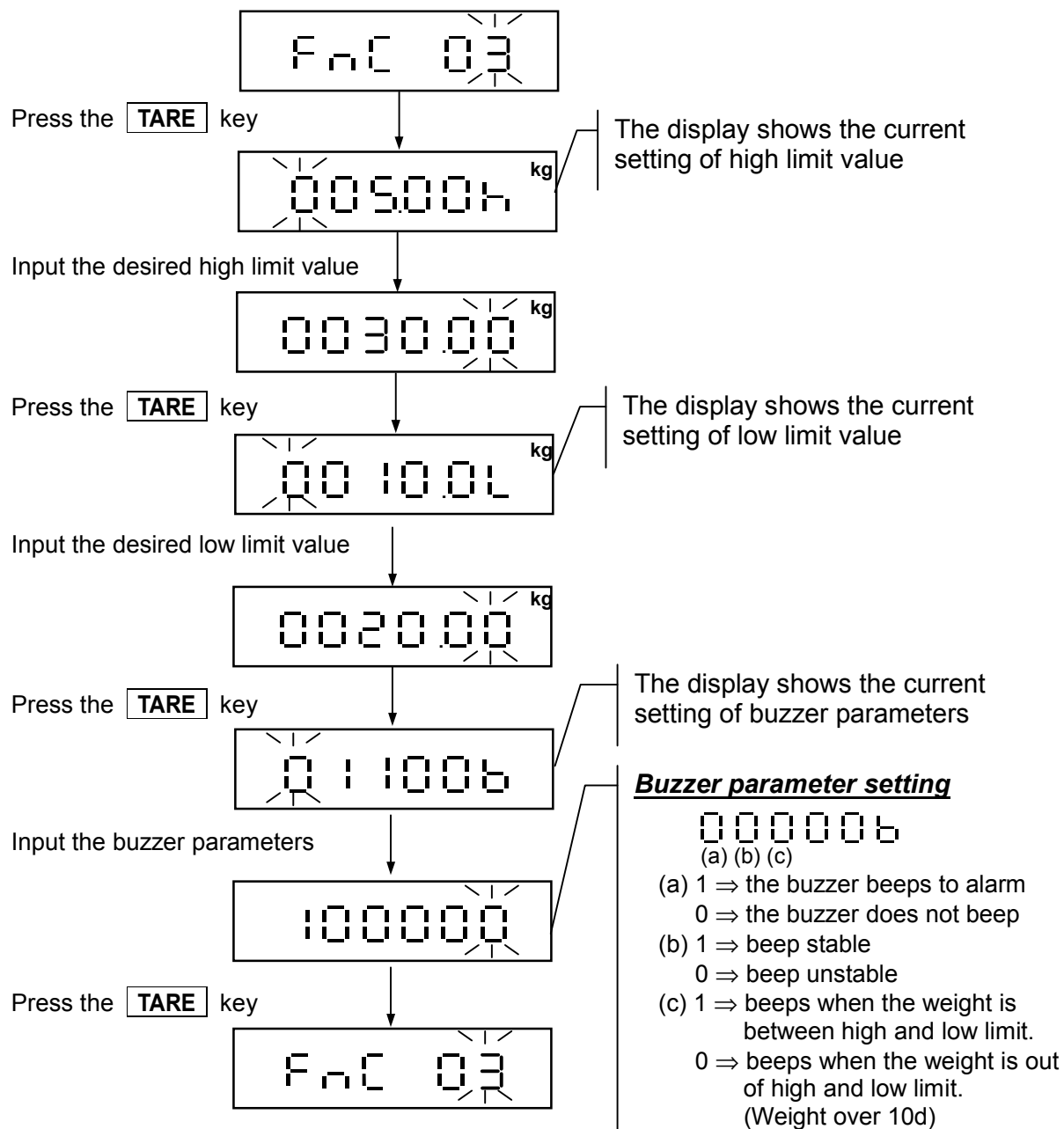
Auto-off timer

If the weight on the platter keeps under 10 divisions while no key is pressed, the scale will automatically switch off after waiting for the set time.



1-3 Check-Weighing Setting F n C 03

- 4 If both the preset high limit and the low limit values are set as 0, the check-weighing function is invalid.



ON/ZERO ⇒ Upward digit selecting (0-9)

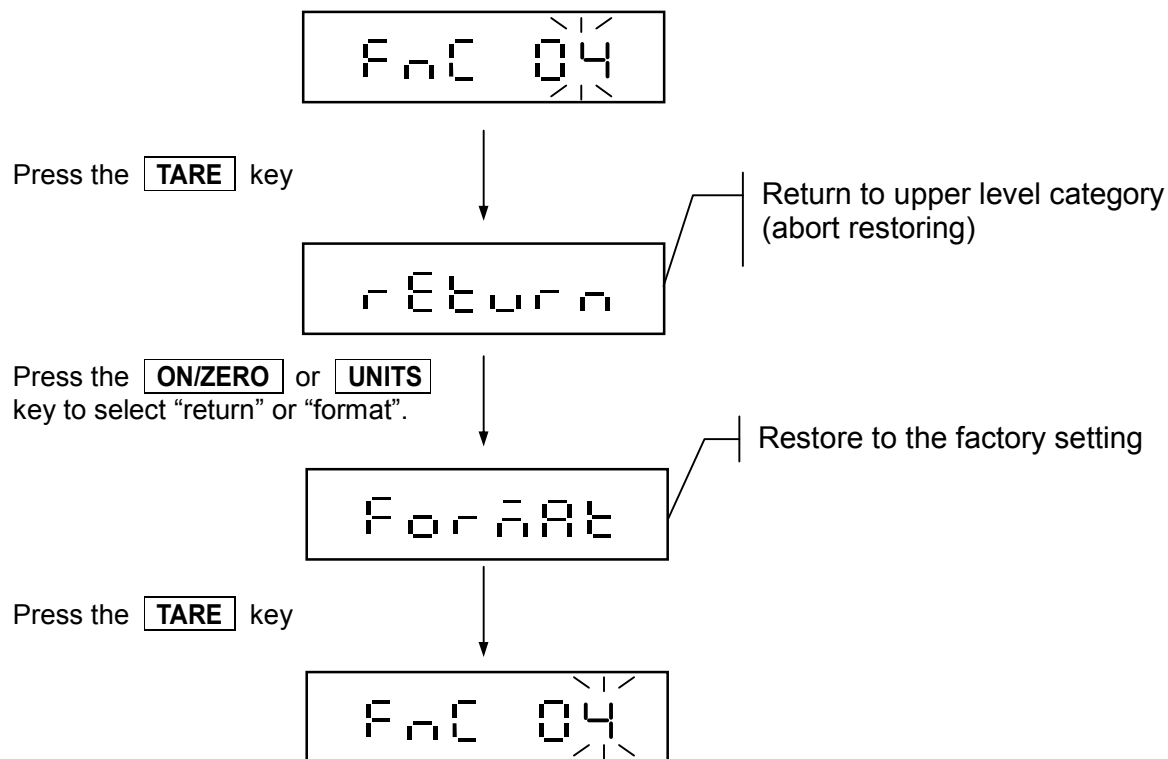
UNITS ⇒ Downward digit selecting (9-0)

TARE ⇒ Move the cursor rightward

NET/GROSS ⇒ Move the cursor leftward



1-4 Restore to the Factory Setting F_nC 04



4 The restored factory settings include the following:

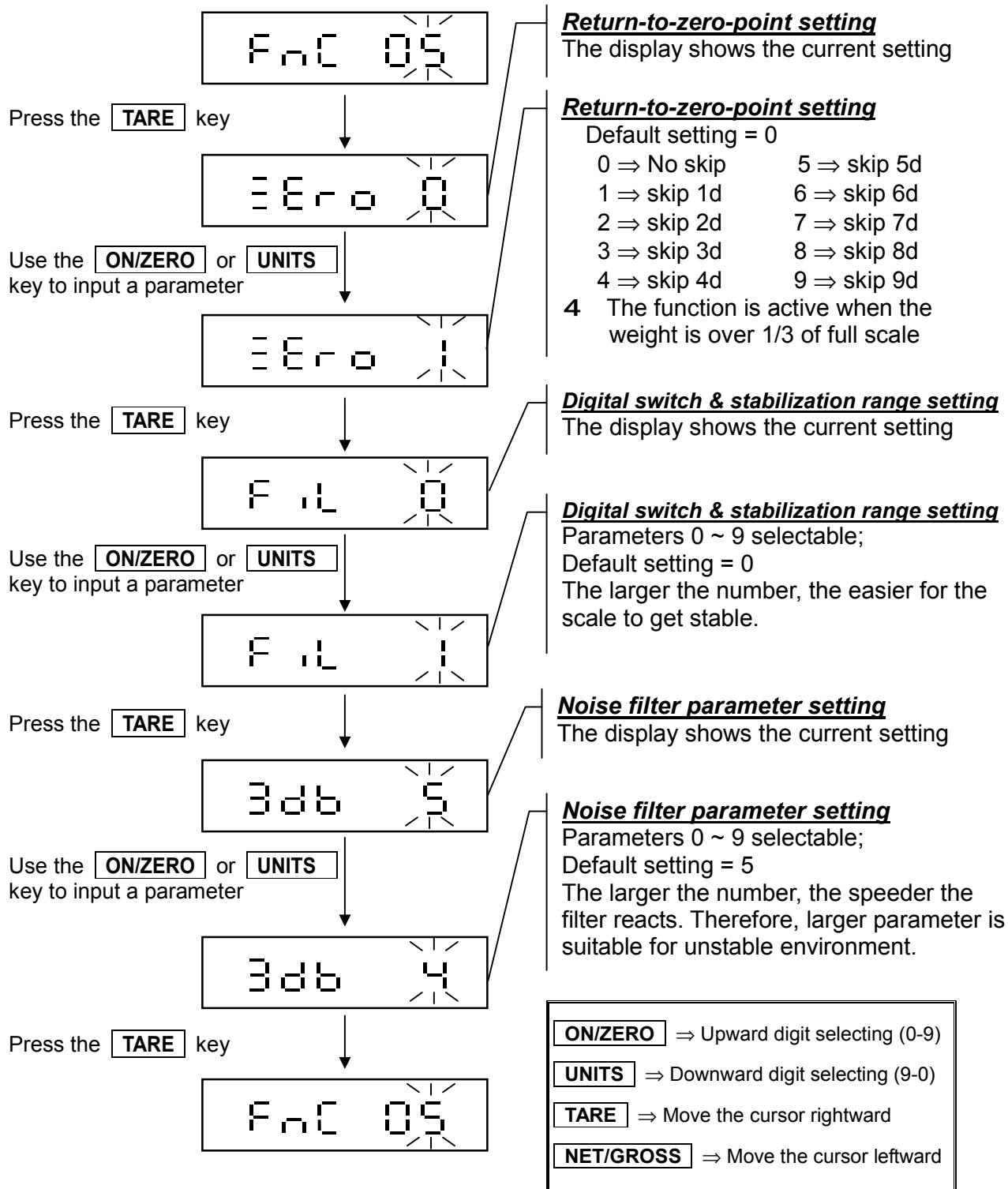
- (1) External weight calibration
- (2) Check-weighing setting
- (3) Environment parameter setting
- (4) Sampling value in counting mode

4 F_nC 04 is not accessible for approval models.



1-5 Environment Parameter Setting F_nC 05

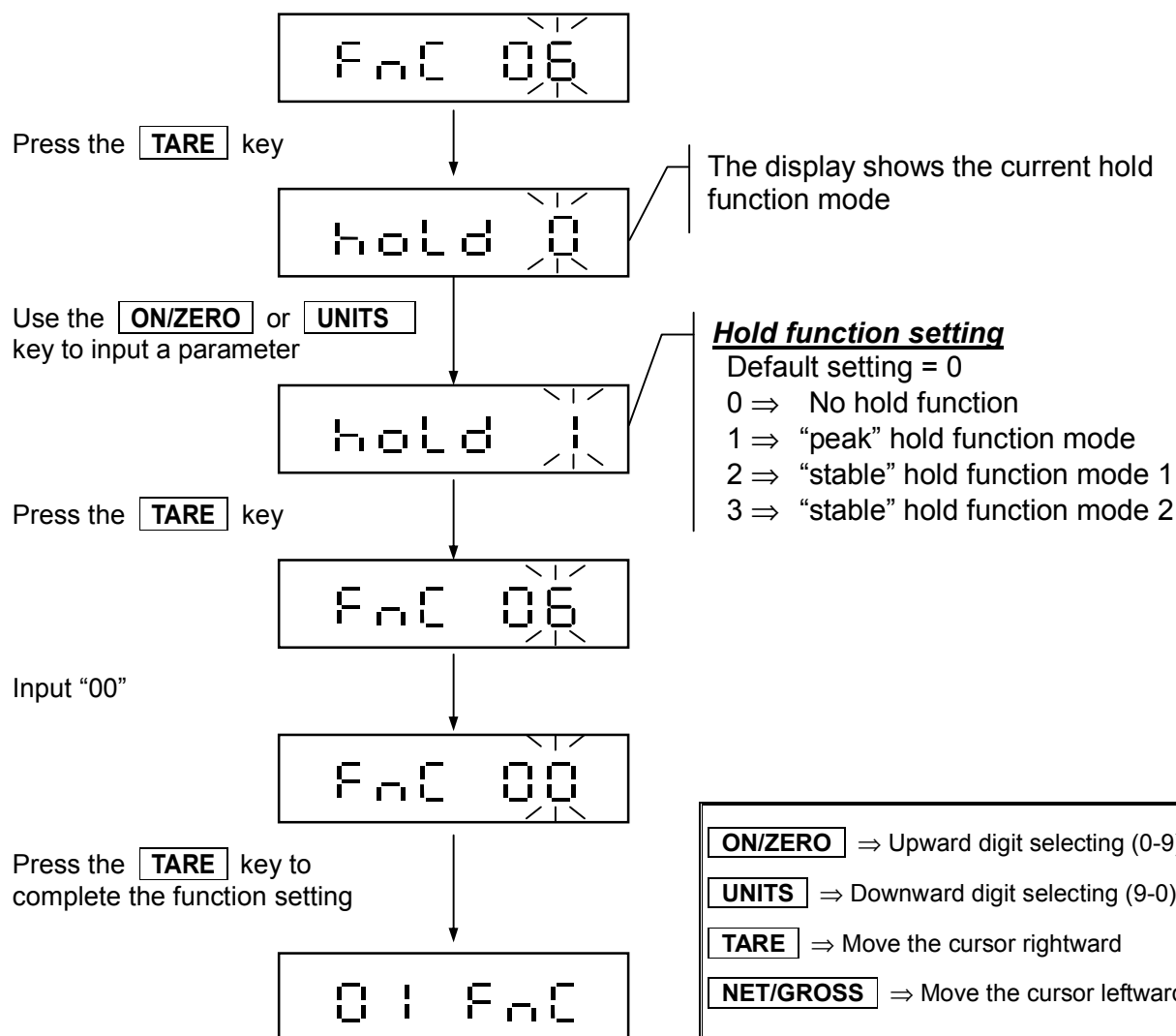
- 4 The parameters in $C F_n 0 1$ remain the same after the ones has been modified in F_nC 05



4 F_nC 05 is not accessible for approval models.



1-6 Hold Function Setting F_hC 06



hold 0 ⇒ **No Hold function**

hold 1 ⇒ **"Peak" hold function mode**

When the weight keeps changing, the scale will automatically hold and display the largest value.

Press any key to clear the held value.

hold 2 ⇒ **"Stable" hold function mode 1**

When the scale becomes stable, the display shows and holds the weight value, which can not be changed.

Press any key to clear the held value.

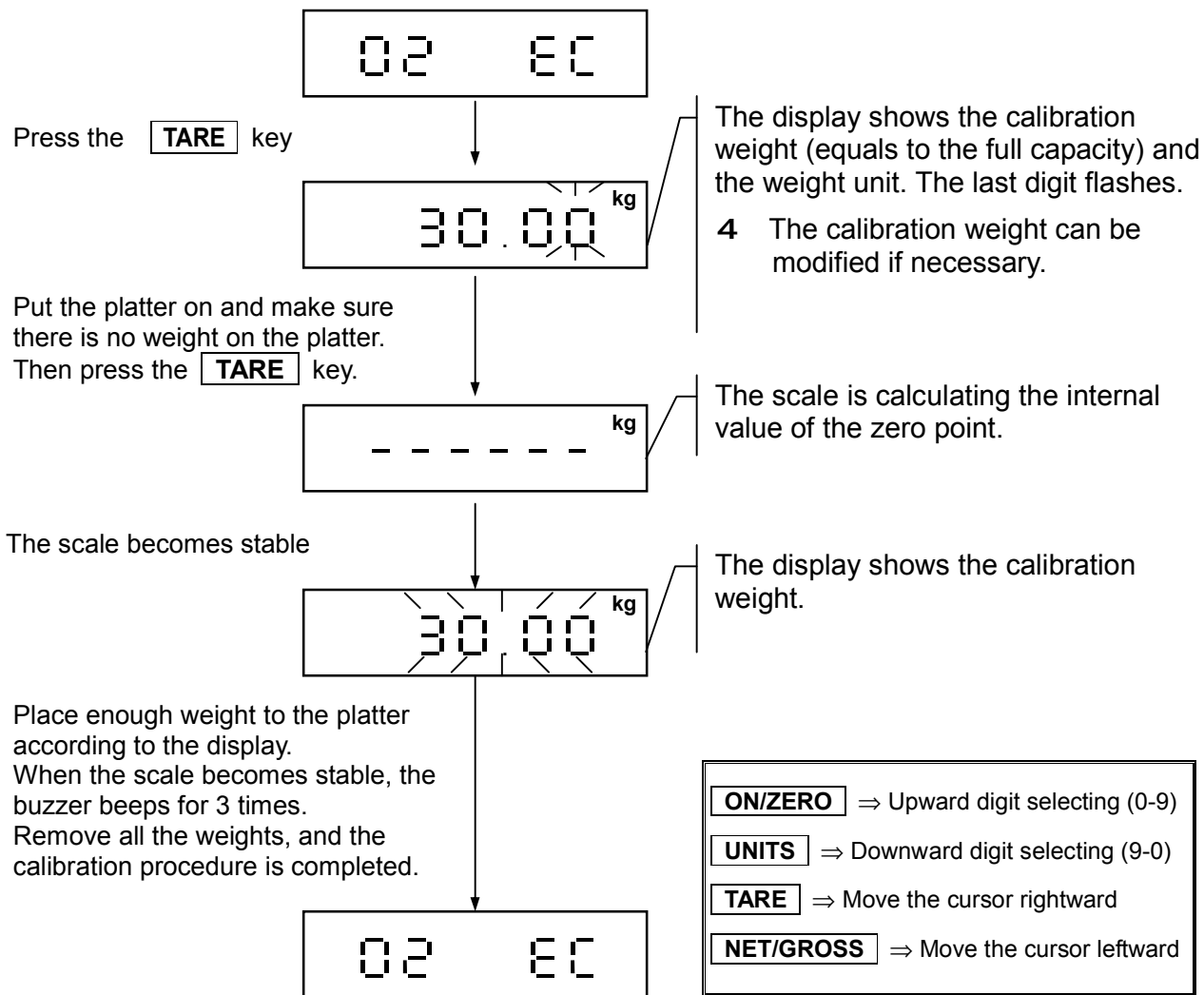
hold 3 ⇒ **"Stable" hold function 2**

When the scale becomes stable, the display shows and holds the weight value, which can not be changed.

When the scale is re-zeroed (weight less than 10d), the held value is automatically cleared.



2. External Weight Calibration 02 EC



4 02 EC is not accessible for approval models.

- 4 It is recommended that the external weight calibration should be carried out by a qualified technician from your supplier to ensure the accuracy of the scale.

**APPENDIX SEVEN-SEGMENT DISPLAY CHARACTERS**

Digit	7 segment letter	Alphabet	7 segment letter	Alphabet	7 segment letter
0		A		N	
1		B		O	
2		C		P	
3		D		Q	
4		E		R	
5		F		S	
6		G		T	
7		H		U	
8		I		V	
9		J		W	
		K		X	
		L		Y	
		M		Z	